

PAT-NO: JP406189314A

DOCUMENT-IDENTIFIER: JP 06189314 A

TITLE: ELECTRONIC CAMERA

----- KWIC -----

## Abstract Text - FPAR (1):

**PURPOSE:** To avoid erroneous correction of automatic white balance even when a focal distance is long by revising colorimetric data in response to the focal distance of an image pickup lens.

## Abstract Text - FPAR (2):

**CONSTITUTION:** A light from an image-pickup lens 1 is exposed by an exposure control means 2 and converted into an electric image signal by an image pickup sensor 3. The image signal is sampled at a sample-and-hold circuit 4 at a prescribed frequency and converted into digital image data at an A/D converter 5. The image data are stored in an external storage device 8 via an interface circuit 7. In the case of the TTL system, colorimetry data are obtained from

Details Text Image HTML KWIC

415 JP 06261324 A

416 JP 06233316 A

417 JP 06189314 A

418 JP 06148592 A

(11)特許出願公開番号  
特開平6-189314  
(公)の第2 平成8年(1996)7月8日

発明者氏名

発明者氏名 氏名氏名 (全 3 頁)

000001307

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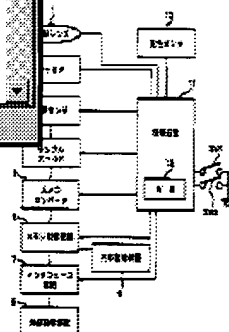
東京都大田区下丸子3丁目38番2号

内田 隆雄

東京都大田区下丸子3丁目38番2号 キヤ

ノン株式会社内

内田 隆雄 敬啓



US-PAT-NO: 6337692

DOCUMENT-IDENTIFIER: US 6337692 B1

**TITLE:** Primary and secondary color manipulations using hue, saturation, luminance and area isolation

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**Detailed Description Text - DETX (32):**

Color correction equipment 80 carries out digital color correction and other video parameter adjustment functions associated with the color correction system 30. The block in FIG. 1 identified as the color correction equipment 80, which includes all of the remaining functions of the preferred RENAISSANCE 8:8:8.TM. digital color correction system 30, is described in greater detail with reference to FIGS. 2-14. Briefly, the color correction equipment 80 receives color correction parameters that define the coefficients of a transformation matrix or "T-matrix" that is applied to an input R,G,B, signal to produce a color corrected output R,G,B signal. The input R,G,B signal and the output R,G,B signal from the T-matrix process are combined within an "alpha mixer" that restricts that application of the color corrections defined in the

Sep. 1, 1996), Chapter 6.  
Understanding Color Maps,  
Guide, Web Edition, 1996 by

(List continued)

Primary Examiner—Matthew  
Assistant Examiner—Motilew  
(74) Attorney, Agent, or Firm  
LLP

(57) ABST:

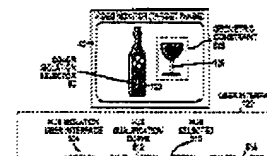
A color correction system that color manipulation in the pre-correction regions of a video domain using hue, saturation. The system may be configured in blocks arranged in series. A block typically allows a color non-overlapping hue sectors values and qualification curve has two video inputs, a first from a previous block, and a second video signal. Each block includes a switch allowing output of a previous block or signal as the input for a given block positioned in the unprocessed color correction block to sync signal with the output video signal. Thus, the color correction block may be applied separately (i.e., in parallel) for each scene process colorist may select the number of blocks in accordance with that colorist.

Details Text Image HTML KWIC

2 US 6337692 B1

0 609 567 A2 8/1994 G06F/15:58  
WO 87/06419 12/1987

59 Claims, 15



US-PAT-NO: 6618091

DOCUMENT-IDENTIFIER: US 6618091 B1

**TITLE:** Image pickup apparatus having image signal  
adjusting means a response characteristic of whi  
controlled in accordance with image magnification

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**Detailed Description Text - DETX (26):**

As is apparent from the foregoing description, according to e  
embodiments described above, it is possible to obtain an image  
state of exposure and the state of white balance are kept visu  
even if a zoom lens, electronic image magnifying means or the  
perform photography accompanied by image magnification.

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119 US 20010000969 A1

120 US 6621519 B2

121 US 6618091 B1

122 US 6614996 B2

12, the color data may be obtained by detecting a signal  
which has not yet been subjected to the processing of the  
electronic image magnifying processing means 12.

In recent years, more photographers have had more  
opportunities to perform photography of higher image mag-  
nifying rates owing to the development of zoom lenses  
having higher zoom magnifications or owing to the spread of  
use of the electronic image magnifying means. However, in  
the case of photography of high image magnifying rates, a  
field of view or a subject image tends to greatly vary with a  
small vibration of the image pickup apparatus due to a hand  
shake or the like, and the brightness or the state of color of  
a subject at which the image pickup apparatus is aimed  
greatly varies. In other words, the above-described auto-  
matic exposure control means at all times controls the state  
of exposure according to the brightness of light which is  
reflected from a subject and passes through the zoom lens 1,  
so that the automatic exposure control means sensitively  
follows even a small variation in the field of view or the  
subject image during the photography of high image mag-  
nifying rates and a variation occurs in the brightness of a  
main subject to be located within the image plane of the  
image pickup apparatus.

In addition, since the automatic white balance control  
means similarly sensitively follows a variation in the field of  
view or the subject image, a variation occurs not only in the  
state of exposure of the main subject but also in the state of  
white balance of the main subject, so that a visually greatly  
impaired image is formed.

**SUMMARY OF THE INVENTION**

It is, therefore, one object of the present invention to

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DERWENT-ACC-NO: 1994-259222

DERWENT-WEEK: 199432

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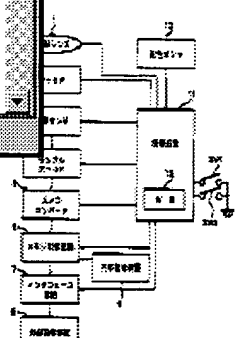
TITLE: Electronic camera - can reduce erroneous correction of white balance which occurs when lens focal distance is long. NoAbstract

----- KWIC -----

Title - TIX (1): Electronic camera - can reduce erroneous correction of white balance which occurs when lens focal distance is long. NoAbstract

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図1



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524	JP 06303486 A	
525	JP 06284440 A	
526	JP 06189314 A	
527	JP 06148593 A	

PAT-NO: JP 361026392A

DOCUMENT-IDENTIFIER: JP 61026392 A

TITLE: WHITE BALANCE ADJUSTER FOR COLOR VIDEO CAMERA

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## Abstract Text - FPAR (1):

**PURPOSE:** To prevent malfunction of the white balance adjustment under plural light sources by mixing color temperature signals from plural color temperature detectors by a ratio in accordance with a zoom magnification of an optical lens system.

特許庁 出願公開

A) 昭61-28392

特許公開 昭和61年(1986)2月5日

請求 発明の数 1 (全1項)

発明 三波長検出式色温度調整装置

特27頁1欄3号

本発明は、色温度調整装置の白平衡調整の特性を、  
光源の色温度変化に伴って自動的に調整する装置  
に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

発明の要旨

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に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

Details Text Image HTML KWIC

470 JP 62206985 A

471 JP 61026392 A

472 JP 61026391 A

473 JP 61026390 A

本発明の要旨

本発明は、色温度調整装置の白平衡調整の特性を、  
光源の色温度変化に伴って自動的に調整する装置  
に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

本発明は、色温度調整装置の白平衡調整の特性を、  
光源の色温度変化に伴って自動的に調整する装置  
に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

(2) 本発明は、色温度調整装置の白平衡調整の特性を、

本発明は、色温度調整装置の白平衡調整の特性を、  
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に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

本発明の要旨

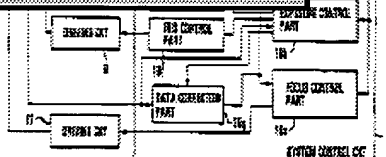
本発明は、色温度調整装置の白平衡調整の特性を、  
光源の色温度変化に伴って自動的に調整する装置  
に関する。特に、光源の色温度変化に伴って、色温度  
調整装置の白平衡調整装置を、自動的に調整する装置  
に関する。

The block diagram illustrates the system architecture. It features a central horizontal bus connecting several key components. On the left side of the bus are the CPU, Main Memory, and Secondary Storage. On the right side are the I/O Controller, Disk Drive, and Tape Drive. Below the bus, there are additional modules labeled 'Control Unit' and 'Data Base'. Arrows indicate the flow of data between these components through the shared bus.

The system control circuit 19 further includes a data correction part 19g which is arranged to correct the detection value of an iris encoder element 4 according to an instruction received from the exposure control part 19b and, after that, to supply information on the corrected detection value to the white balance control part 19a and the focus control part 19c. Although the details of it will be described later herein, the data correction circuit 19g is briefly described as follows: In a case where a change is caused in the aperture value by change-over from one program shooting mode to another while the object remains unchanged, the white balance control and the focus control which use the aperture value as a control parameter are prevented from malfunctioning, by correcting and adjusting the aperture value to a value obtained in an ordinary shooting before the change-over and by supplying the corrected aperture value to the white balance control part 19a and the focus control part 19c.

As mentioned in the foregoing, this change greatly affects the focus control and the white balance control. In the focus control, the speed of the focus

<b>221</b>	<b>US 6008859 A</b>
<b>222</b>	<b>US 6005612 A</b>
<b>223</b>	<b>US 5999215 A</b>
<b>224</b>	<b>US 5978038 A</b>



### References Cited

## U.S. PATENT DOCUMENTS

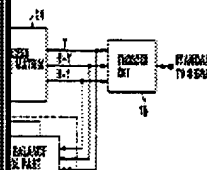
2	1-1983	Kittling et al.	1983:14
3	2-1983	Amal	1983:17
4	3-1983	Matheson et al.	1983:21
5	4-1983	Kittling et al.	1983:25
6	5-1983	Kittling et al.	1983:29
7	6-1983	Amal et al.	1983:33
8	7-1983	Matheson et al.	1983:37
9	8-1983	Kittling et al.	1983:41
10	9-1983	Kittling et al.	1983:45

Editor—Duffy Duff  
 Editor—Arthur B. O'Brien  
 Post & Free—Boyle, Baffin & Dine

## ABSTRACT

shutter aperture includes an image sensor photoelectric converter, an iris light controlling act, an iris arranged to adjust the quantity of incident on the image sensor, a detection circuit in the state of the iris, a controller which is output of the detection circuit so as to correct the iris control by a change in the mode and a focus adjusting motor. The controller is arranged such that, when an aperture value is changed by a change in the shooting mode, the controller corrects the change of the aperture value by aperture value schedule before the aperture value is corrected to the focus adjusting device.

6 Clams, 2 Diving Snails





light around the place where the image pickup device is set in output a plurality of first color component signals, image pickup shooting the object to output a plurality of second color component control signal producing means for producing a first white balance control signal of the color temperature sensor system, using the component signals, second control signal producing means for white balance control signal of the camera color signal processing using the second color component signals, brightness detecting detecting whether it is brighter around the place where the image is set in position or around the object in order to output a first signal in accordance with the detection result, zoom amount detecting an amount of zoom in/out of the camera in order to output a control signal in accordance with the amount of zoom, system for receiving the first and second white balance control signals, second control signals to selectively output one of the first and balance control signals on the basis of the value of the first and control signals, and level regulating means for regulating a level of the first and second color component signals in response to white balance control signal is selected by the system selecting means.

#### Brief Summary Text - BSTX (24):

In the ninth aspect of the present invention, an automatic white balance regulating device built in an image pickup device for shooting a

Details Text Image HTML KWIC

251 US 5729363 A

252 US 5729288 A

253 US 5729286 A

254 US 5729284 A

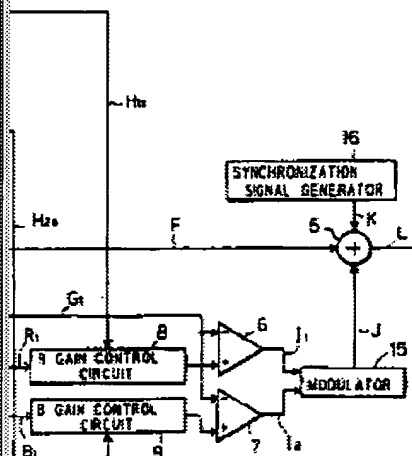
Maier & Neustadt, P.C.

[57]

#### ABSTRACT

An automatic white balance regulating device is provided with at least two of a color temperature sensor system, camera color signal processing system and a manual operating system which are selected by a system selector in accordance with a state of shooting circumstance. Thus, a white balance control signal of a system appropriate to the shooting situation is selected so that a white balance regulation can be appropriately performed in accordance with the shooting situation.

6 Claims, 30 Drawing Sheets



US-PAT-NO: 5565913

DOCUMENT-IDENTIFIER: US 5565913 A

**TITLE:** White balance control device for use in both an outdoor and indoor mode

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**Brief Summary Text - BSTX (33):**

controlling means for inputting zoom information after a battery source is turned on and a value of white balance control signals converges, wherein the processing means increases the reference values when a zooming position is in a telescope condition or a brightness value of an object is high, the processing means decreases the reference values when the zooming position is in a wide condition or the brightness value of an object is low so that a recognize level for changing a brightness value can be determined and the values of the white balance control signals are changed in order to equalize the integral averaged values of each first and second color difference signal and the respective reference values when a difference between a present brightness value and a brightness value at the last converged time is more than the recognize level



Patent Number: 5,565,913  
Date of Patent: Oct. 16, 1996

11/2001 Koshida et al. 344,423 X  
12/1993 Taylor et al. 540,333 X  
12/1993 Tamari 546,233 X  
12/1993 Miyahara 548,927 X  
12/1994 Shiroki et al. 548,229 X  
5/1994 Kim 549,475 X  
5/1994 Rando 549,825 X  
6/1994 Sato et al. 541,323 X

**DESIGN PATENT DOCUMENTS**

6/1992 Rado 524,975  
11/1992 Rado 524,975  
11/1992 Rado 524,975  
12/1992 Rado 524,975  
6/1993 Rado 524,975

Shiroki—Yasuo K. Kanda  
Rado—John W. Miller

**ABSTRACT**

A control device is provided for use in a video still video camera in which white balance is controlled so that an object may be captured with the minimum of color failure. A white balance control device detects a mean integral averaged value for two color data R-Y and B-Y and a reference value. The difference value of the white balance R-Y and B-Y may be changed when the object is changed by more than a predetermined value. In an indoor mode, the values of the white balance R-Y and B-Y are positioned in correspondence to various artificial light sources such as the values of the white balance are positioned within a range corresponding to

Y. Kanda, 17 Dering Road

Details Text Images HTML KWIC

276 US 5581362 A

277 US 5576841 A

278 US 5565913 A

279 US 5555022 A



11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30  
 US0202523572A  
 Serial Number: 5,528,372  
 Date of Patent: Jun. 15, 1998  
 57:00: Division \_\_\_\_\_ K207

34382	Germany
14381	Japan.
14388	Japan.
127349	Japan.
23382	Japan.

John - Kim Yps Vs  
vs. of Fibre - John Sprink, McClellan  
Trade

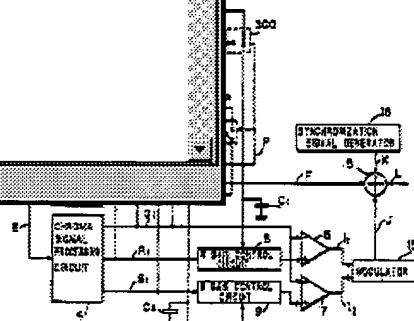
while internal regulating device is provided for at a certain temperature sensor (thermal) signal processing system and a manual operation is allowed by a special selector switch at a state of alarming circumstances. Thus, a control signal of a system appropriate to the device is released so that a while balance signal is automatically performed in accordance with the

11 Cedar, 20 Douglas Spruce

**In the ninth aspect of the present invention, an automatic white balance regulating device built in an image pickup device for shooting an object and provided with a color temperature sensor system, a camera color signal processing system and a manual operating system comprises a plurality of color sensors for receiving the light around the place where the image pickup device is set in position to output a plurality of first color component signals, image pickup means for shooting the object to output a plurality of second color component signals, first control signal producing means for producing a first white balance control signal of the color temperature sensor system.**

 Details
  Text
  Image
  HTML
  KWIC

<b>282</b>	<b>US 5532742 A</b>
<b>283</b>	<b>US 5530474 A</b>
<b>284</b>	<b>US 5528373 A</b>
<b>285</b>	<b>US 5528293 A</b>



US-PAT-NO: 5448292

DOCUMENT-IDENTIFIER: US 5448292 A

**TITLE:** White balance control device employing zoom information  
for photographing an object without the occurrence of  
color failure

----- KWIC -----

**Abstract Text - ABTX (1):**

A white balance control device is provided for use in a video camera or a still video camera, each having zoom capabilities, in which white balance control signals are controlled so that an object may be photographed without the occurrence of color failure. A recognition level or threshold is set as a function of zoom information. A microcomputer of the white balance control device detects a difference between integral averaged values for two color difference signals R-Y and B-Y and a reference value. Depending on the difference, values of the white balance control signals Rcont and Bcont may be changed when the brightness of an object is changed by more than the recognition level. However, the values are positioned within a variable region

Patent Number: 5,448,292  
Date of Patent: Sep. 8, 1995

11/1992 Kurokawa et al. 375/28  
12/1992 Takeda 375/28  
11/1991 Miyazaki 375/28  
5/1994 Suzuki 348/255  
6/1994 Sato et al. 348/255

**NON-PATENT DOCUMENTS**

6/1991 Japan 5049 9/71  
11/1991 Japan 5049 9/71  
12/1991 Japan 5049 9/71  
12/1991 Japan 5049 9/71  
6/1991 Japan 5049 9/71

Inventor—Yoshio R. Kurokawa  
Attorney—John W. Miller

**ABSTRACT**

A white balance control device is provided for use in a video camera or a still video camera, each having zoom capabilities, in which white balance control signals are controlled so that an object may be photographed without the occurrence of color failure. A recognition level is set as a function of zoom information. A microcomputer of the white balance control device detects a difference between integral averaged values for two color difference signals R-Y and B-Y and a reference value. Depending on the difference, values of the white balance control signals Rcont and Bcont may be changed when the brightness of an object is changed by more than the recognition level. However, the values are positioned within a variable region and when the white balance control signals Rcont and Bcont become saturated, the variable region is set

8 Claims, 27 Drawing Sheets

FIG.

FIG. 10

Details Text Image HTML KWIC

292 US 5465133 A

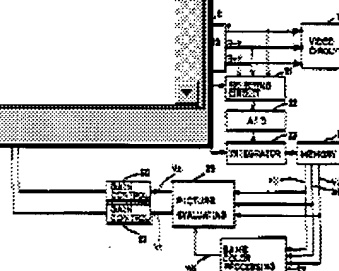
293 US 5465116 A

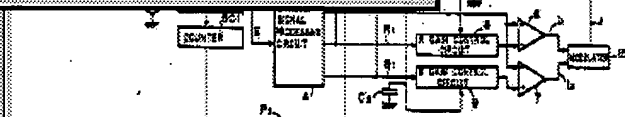
294 US 5448292 A

295 US 5442408 A



296 US 5424772 A





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